

Apex Labs

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Friday, July 31, 2015

Terry Rice
Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682

RE: Storedahl-Evraz / 1033Q

Enclosed are the results of analyses for work order A5G0329, which was received by the laboratory on 7/13/2015 at 2:50:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

DRAFT REPORT

The results provided in this report are PRELIMINARY and are subject to change based on subsequent analysis, QC validation or final data review. Please use these results with the understanding that they may have not been finalized by the laboratory

DRAFT REPORT, DATA SUBJECT TO CHANGE

Page 1 of 34

Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682

Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BB-S Comp	A5G0329-01	Soil	07/13/15 08:40	07/13/15 14:50
BB-C Comp	A5G0329-02	Soil	07/13/15 08:50	07/13/15 14:50
BB-N Comp	A5G0329-03	Soil	07/13/15 09:00	07/13/15 14:50
BB-Total Comp	A5G0329-04	Soil	07/13/15 09:11	07/13/15 14:50

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682

Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
BB-Total Comp (A5G0329-04)			Matrix: Soil		Batch: 5070726			C-07
Aroclor 1016	ND	---	9.19	ug/kg dry	1	07/27/15 17:53	EPA 8082A	
Aroclor 1221	ND	---	9.19	"	"	"	"	
Aroclor 1232	ND	---	9.19	"	"	"	"	
Aroclor 1242	ND	---	9.19	"	"	"	"	
Aroclor 1248	ND	---	9.19	"	"	"	"	
Aroclor 1254	ND	---	9.19	"	"	"	"	
Aroclor 1260	ND	---	9.19	"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 90 %</i>	<i>Limits: 72-126 %</i>	"	"	"	

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Project: Storedahl-Evrax
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
BB-Total Comp (A5G0329-04RE1)			Matrix: Soil		Batch: 5070768			C-05
Aldrin	ND	---	1.80	ug/kg dry	1	07/30/15 16:25	EPA 8081B	
alpha-BHC	ND	---	1.80	"	"	"	"	
beta-BHC	ND	---	1.80	"	"	"	"	
delta-BHC	ND	---	1.80	"	"	"	"	
gamma-BHC (Lindane)	ND	---	1.80	"	"	"	"	
cis-Chlordane	ND	---	1.80	"	"	"	"	
trans-Chlordane	ND	---	1.80	"	"	"	"	
4,4'-DDD	ND	---	1.80	"	"	"	"	
4,4'-DDE	ND	---	1.80	"	"	"	"	
4,4'-DDT	ND	---	1.80	"	"	"	"	
Dieldrin	ND	---	1.80	"	"	"	"	
Endosulfan I	ND	---	1.80	"	"	"	"	
Endosulfan II	ND	---	1.80	"	"	"	"	
Endosulfan sulfate	ND	---	1.80	"	"	"	"	
Endrin	ND	---	1.80	"	"	"	"	
Endrin Aldehyde	ND	---	1.80	"	"	"	"	
Endrin ketone	ND	---	1.80	"	"	"	"	
Heptachlor	ND	---	1.80	"	"	"	"	
Heptachlor epoxide	ND	---	1.80	"	"	"	"	
Methoxychlor	ND	---	5.41	"	"	"	"	
Chlordane (Technical)	ND	---	54.1	"	"	"	"	
Toxaphene (Total)	ND	---	54.1	"	"	"	"	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>			<i>Recovery: 67 %</i>	<i>Limits: 42-129 %</i>	"	"	"	
<i>Decachlorobiphenyl (Surr)</i>			<i>104 %</i>	<i>Limits: 65-151 %</i>	"	"	"	<i>Q-41</i>

DRAFT REPORT

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Project: Storedahl-Evrax
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
BB-Total Comp (A5G0329-04RE2)			Matrix: Soil		Batch: 5070714			
Acenaphthene	ND	---	2.65	ug/kg dry	1	07/27/15 15:57	EPA 8270D	
Acenaphthylene	ND	---	2.65	"	"	"	"	
Anthracene	ND	---	2.65	"	"	"	"	
Benz(a)anthracene	ND	---	2.65	"	"	"	"	
Benzo(a)pyrene	ND	---	3.97	"	"	"	"	
Benzo(b)fluoranthene	ND	---	3.97	"	"	"	"	
Benzo(k)fluoranthene	ND	---	3.97	"	"	"	"	
Benzo(g,h,i)perylene	ND	---	2.65	"	"	"	"	
Chrysene	ND	---	2.65	"	"	"	"	
Dibenz(a,h)anthracene	ND	---	2.65	"	"	"	"	
Fluoranthene	ND	---	2.65	"	"	"	"	
Fluorene	ND	---	2.65	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	---	2.65	"	"	"	"	
1-Methylnaphthalene	ND	---	5.29	"	"	"	"	
2-Methylnaphthalene	ND	---	5.29	"	"	"	"	
Naphthalene	ND	---	5.29	"	"	"	"	
Phenanthrene	ND	---	2.65	"	"	"	"	
Pyrene	ND	---	2.65	"	"	"	"	
Carbazole	ND	---	3.97	"	"	"	"	
Dibenzofuran	ND	---	2.65	"	"	"	"	
4-Chloro-3-methylphenol	ND	---	26.5	"	"	"	"	
2-Chlorophenol	ND	---	13.2	"	"	"	"	
2,4-Dichlorophenol	ND	---	13.2	"	"	"	"	
2,4-Dimethylphenol	ND	---	13.2	"	"	"	"	
2,4-Dinitrophenol	ND	---	66.2	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	---	66.2	"	"	"	"	
2-Methylphenol	ND	---	6.62	"	"	"	"	
3+4-Methylphenol(s)	ND	---	6.62	"	"	"	"	
2-Nitrophenol	ND	---	26.5	"	"	"	"	
4-Nitrophenol	ND	---	26.5	"	"	"	"	
Pentachlorophenol (PCP)	ND	---	26.5	"	"	"	"	
Phenol	ND	---	5.29	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	---	13.2	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	---	13.2	"	"	"	"	
2,4,5-Trichlorophenol	ND	---	13.2	"	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
BB-Total Comp (A5G0329-04RE2)			Matrix: Soil		Batch: 5070714			
2,4,6-Trichlorophenol	ND	---	13.2	ug/kg dry	1	"	EPA 8270D	
Bis(2-ethylhexyl)phthalate	ND	---	39.7	"	"	"	"	
Butyl benzyl phthalate	ND	---	26.5	"	"	"	"	
Diethylphthalate	ND	---	26.5	"	"	"	"	
Dimethylphthalate	ND	---	26.5	"	"	"	"	
Di-n-butylphthalate	ND	---	26.5	"	"	"	"	
Di-n-octyl phthalate	ND	---	26.5	"	"	"	"	
N-Nitrosodimethylamine	ND	---	6.62	"	"	"	"	
N-Nitroso-di-n-propylamine	ND	---	6.62	"	"	"	"	
N-Nitrosodiphenylamine	ND	---	6.62	"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	---	6.62	"	"	"	"	
Bis(2-Chloroethyl) ether	ND	---	6.62	"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	---	6.62	"	"	"	"	
Hexachlorobenzene	ND	---	2.65	"	"	"	"	
Hexachlorobutadiene	ND	---	6.62	"	"	"	"	
Hexachlorocyclopentadiene	ND	---	13.2	"	"	"	"	
Hexachloroethane	ND	---	6.62	"	"	"	"	
2-Chloronaphthalene	ND	---	2.65	"	"	"	"	
1,2-Dichlorobenzene	ND	---	6.62	"	"	"	"	
1,3-Dichlorobenzene	ND	---	6.62	"	"	"	"	
1,4-Dichlorobenzene	ND	---	6.62	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	6.62	"	"	"	"	
4-Bromophenyl phenyl ether	ND	---	6.62	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	---	6.62	"	"	"	"	
Aniline	ND	---	13.2	"	"	"	"	
4-Chloroaniline	ND	---	6.62	"	"	"	"	
2-Nitroaniline	ND	---	52.9	"	"	"	"	
3-Nitroaniline	ND	---	52.9	"	"	"	"	
4-Nitroaniline	ND	---	52.9	"	"	"	"	
Nitrobenzene	ND	---	26.5	"	"	"	"	
2,4-Dinitrotoluene	ND	---	26.5	"	"	"	"	
2,6-Dinitrotoluene	ND	---	26.5	"	"	"	"	
Benzoic acid	ND	---	330	"	"	"	"	
Benzyl alcohol	ND	---	13.2	"	"	"	"	
Isophorone	ND	---	6.62	"	"	"	"	

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Project: Storedahl-Evraz

Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
BB-Total Comp (A5G0329-04RE2)			Matrix: Soil		Batch: 5070714			
Azobenzene (1,2-DPH)	ND	---	6.62	ug/kg dry	1	"	EPA 8270D	
Bis(2-Ethylhexyl) adipate	ND	---	66.2	"	"	"	"	
3,3'-Dichlorobenzidine	ND	---	26.5	"	"	"	"	
1,2-Dinitrobenzene	ND	---	66.2	"	"	"	"	
1,3-Dinitrobenzene	ND	---	66.2	"	"	"	"	
1,4-Dinitrobenzene	ND	---	66.2	"	"	"	"	
Pyridine	ND	---	13.2	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 77 %</i>	<i>Limits: 37-122 %</i>	"	"	"	
<i>2-Fluorobiphenyl (Surr)</i>			<i>65 %</i>	<i>Limits: 44-115 %</i>	"	"	"	
<i>Phenol-d6 (Surr)</i>			<i>60 %</i>	<i>Limits: 33-122 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>			<i>97 %</i>	<i>Limits: 54-127 %</i>	"	"	"	
<i>2-Fluorophenol (Surr)</i>			<i>63 %</i>	<i>Limits: 35-115 %</i>	"	"	"	
<i>2,4,6-Tribromophenol (Surr)</i>			<i>88 %</i>	<i>Limits: 39-132 %</i>	"	"	"	Q-41

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Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
BB-S Comp (A5G0329-01)			Matrix: Soil					
Batch: 5070314								
Arsenic	4.29	---	1.02	mg/kg dry	10	07/13/15 19:11	EPA 6020A	
BB-C Comp (A5G0329-02)			Matrix: Soil					
Batch: 5070314								
Arsenic	4.43	---	1.04	mg/kg dry	10	07/13/15 19:29	EPA 6020A	
BB-N Comp (A5G0329-03)			Matrix: Soil					
Batch: 5070314								
Arsenic	4.46	---	1.10	mg/kg dry	10	07/13/15 19:34	EPA 6020A	
BB-Total Comp (A5G0329-04)			Matrix: Soil					
Batch: 5070314								
Arsenic	3.91	---	1.10	mg/kg dry	10	07/13/15 19:38	EPA 6020A	
Cadmium	ND	---	0.220	"	"	"	"	
Copper	25.2	---	2.20	"	"	"	"	
Manganese	323	---	1.10	"	"	"	"	
Mercury	ND	---	0.0881	"	"	"	"	
Zinc	28.9	---	4.40	"	"	"	"	
Batch: 5070723								
Chromium	8.59	---	1.10	"	"	07/28/15 22:56	"	
Lead	3.36	---	0.220	"	"	"	"	

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Project: Storedahl-Evraz
Project Number: 1033Q
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07/31/15 16:42

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
BB-S Comp (A5G0329-01)			Matrix: Soil		Batch: 5070299			
% Solids	94.7	---	1.00	% by Weight	1	07/14/15 09:14	EPA 8000C	
BB-C Comp (A5G0329-02)			Matrix: Soil		Batch: 5070299			
% Solids	95.8	---	1.00	% by Weight	1	07/14/15 09:14	EPA 8000C	
BB-N Comp (A5G0329-03)			Matrix: Soil		Batch: 5070299			
% Solids	96.0	---	1.00	% by Weight	1	07/14/15 09:14	EPA 8000C	
BB-Total Comp (A5G0329-04)			Matrix: Soil		Batch: 5070299			
% Solids	95.6	---	1.00	% by Weight	1	07/14/15 09:14	EPA 8000C	

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Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070726 - EPA 3546						Soil						
Blank (5070726-BLK1)			Prepared: 07/27/15 12:08					Analyzed: 07/27/15 17:53			C-07	
EPA 8082A												
Aroclor 1016	ND	---	8.33	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	8.33	"	"	---	---	---	---	---	---	
Aroclor 1232	ND	---	8.33	"	"	---	---	---	---	---	---	
Aroclor 1242	ND	---	8.33	"	"	---	---	---	---	---	---	
Aroclor 1248	ND	---	8.33	"	"	---	---	---	---	---	---	
Aroclor 1254	ND	---	8.33	"	"	---	---	---	---	---	---	
Aroclor 1260	ND	---	8.33	"	"	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 97 %		Limits: 72-126 %		Dilution: 1x						
LCS (5070726-BS1)			Prepared: 07/27/15 12:08					Analyzed: 07/27/15 18:11			C-07	
EPA 8082A												
Aroclor 1016	204	---	10.0	ug/kg wet	1	250	---	82	47-134%	---	---	
Aroclor 1260	269	---	10.0	"	"	"	---	108	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 98 %		Limits: 72-126 %		Dilution: 1x						
Duplicate (5070726-DUP1)			Prepared: 07/27/15 12:08					Analyzed: 07/27/15 18:29			C-07	
QC Source Sample: BB-Total Comp (A5G0329-04)												
EPA 8082A												
Aroclor 1016	ND	---	9.16	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1221	ND	---	9.16	"	"	---	ND	---	---	---	30%	
Aroclor 1232	ND	---	9.16	"	"	---	ND	---	---	---	30%	
Aroclor 1242	ND	---	9.16	"	"	---	ND	---	---	---	30%	
Aroclor 1248	ND	---	9.16	"	"	---	ND	---	---	---	30%	
Aroclor 1254	ND	---	9.16	"	"	---	ND	---	---	---	30%	
Aroclor 1260	ND	---	9.16	"	"	---	ND	---	---	---	30%	
Surr: Decachlorobiphenyl (Surr)		Recovery: 88 %		Limits: 72-126 %		Dilution: 1x						

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Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070768 - EPA 3546/3640A (GPC)						Soil						
Blank (5070768-BLK1)			Prepared: 07/27/15 09:39					Analyzed: 07/30/15 15:48			C-05	
EPA 8081B												
Aldrin	ND	---	1.67	ug/kg wet	1	---	---	---	---	---	---	
alpha-BHC	ND	---	1.67	"	"	---	---	---	---	---	---	
beta-BHC	ND	---	1.67	"	"	---	---	---	---	---	---	
delta-BHC	ND	---	1.67	"	"	---	---	---	---	---	---	
gamma-BHC (Lindane)	ND	---	1.67	"	"	---	---	---	---	---	---	
cis-Chlordane	ND	---	1.67	"	"	---	---	---	---	---	---	
trans-Chlordane	ND	---	1.67	"	"	---	---	---	---	---	---	
4,4'-DDD	ND	---	1.67	"	"	---	---	---	---	---	---	
4,4'-DDE	ND	---	1.67	"	"	---	---	---	---	---	---	
4,4'-DDT	ND	---	1.67	"	"	---	---	---	---	---	---	
Dieldrin	ND	---	1.67	"	"	---	---	---	---	---	---	
Endosulfan I	ND	---	1.67	"	"	---	---	---	---	---	---	
Endosulfan II	ND	---	1.67	"	"	---	---	---	---	---	---	
Endosulfan sulfate	ND	---	1.67	"	"	---	---	---	---	---	---	
Endrin	ND	---	1.67	"	"	---	---	---	---	---	---	
Endrin Aldehyde	ND	---	1.67	"	"	---	---	---	---	---	---	
Endrin ketone	ND	---	1.67	"	"	---	---	---	---	---	---	
Heptachlor	ND	---	1.67	"	"	---	---	---	---	---	---	
Heptachlor epoxide	ND	---	1.67	"	"	---	---	---	---	---	---	
Methoxychlor	ND	---	5.00	"	"	---	---	---	---	---	---	
Chlordane (Technical)	ND	---	50.0	"	"	---	---	---	---	---	---	
Toxaphene (Total)	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 66 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		109 %		65-151 %		"		Q-41				

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Project: Storedahl-Evraz

Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070768 - EPA 3546/3640A (GPC)							Soil					
LCS (5070768-BS1)				Prepared: 07/27/15 09:39		Analyzed: 07/30/15 16:07					C-05	
gamma-BHC (Lindane)	45.7	---	2.00	"	"	"	---	91	49-135%	---	---	
cis-Chlordane	47.6	---	2.00	"	"	"	---	95	54-133%	---	---	
trans-Chlordane	49.6	---	2.00	"	"	"	---	99	53-135%	---	---	
4,4'-DDD	56.0	---	2.00	"	"	"	---	112	56-139%	---	---	Q-41
4,4'-DDE	51.0	---	2.00	"	"	"	---	102	56-134%	---	---	
4,4'-DDT	65.6	---	2.00	"	"	"	---	131	50-141%	---	---	Q-41
Dieldrin	51.6	---	2.00	"	"	"	---	103	56-136%	---	---	
Endosulfan I	50.2	---	2.00	"	"	"	---	100	52-132%	---	---	
Endosulfan II	55.8	---	2.00	"	"	"	---	112	53-134%	---	---	Q-41
Endosulfan sulfate	57.3	---	2.00	"	"	"	---	115	55-136%	---	---	Q-41
Endrin	55.9	---	2.00	"	"	"	---	112	56-140%	---	---	Q-41
Endrin Aldehyde	51.5	---	2.00	"	"	"	---	103	35-137%	---	---	Q-41
Endrin ketone	56.2	---	2.00	"	"	"	---	112	55-136%	---	---	Q-41
Heptachlor	46.0	---	2.00	"	"	"	---	92	47-136%	---	---	
Heptachlor epoxide	48.5	---	2.00	"	"	"	---	97	52-136%	---	---	
Methoxychlor	72.5	---	6.00	"	"	"	---	145	52-143%	---	---	Q-41
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 73 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		119 %		65-151 %		"		Q-41				

Duplicate (5070768-DUP1)

Prepared: 07/27/15 09:39 Analyzed: 07/30/15 16:43

C-05

QC Source Sample: BB-Total Comp (A5G0329-04RE1)

EPA 8081B

Aldrin	ND	---	1.75	ug/kg dry	1	---	ND	---	---	---	30%
alpha-BHC	ND	---	1.75	"	"	---	ND	---	---	---	30%
beta-BHC	ND	---	1.75	"	"	---	ND	---	---	---	30%
delta-BHC	ND	---	1.75	"	"	---	ND	---	---	---	30%
gamma-BHC (Lindane)	ND	---	1.75	"	"	---	ND	---	---	---	30%
cis-Chlordane	ND	---	1.75	"	"	---	ND	---	---	---	30%
trans-Chlordane	ND	---	1.75	"	"	---	ND	---	---	---	30%
4,4'-DDD	ND	---	1.75	"	"	---	ND	---	---	---	30%
4,4'-DDE	ND	---	1.75	"	"	---	ND	---	---	---	30%
4,4'-DDT	ND	---	1.75	"	"	---	ND	---	---	---	30%

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070768 - EPA 3546/3640A (GPC)							Soil					
Duplicate (5070768-DUP1)					Prepared: 07/27/15 09:39		Analyzed: 07/30/15 16:43				C-05	
QC Source Sample: BB-Total Comp (A5G0329-04RE1)												
Dieldrin	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Endosulfan I	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Endosulfan II	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Endosulfan sulfate	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Endrin	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Endrin Aldehyde	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Endrin ketone	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Heptachlor	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Heptachlor epoxide	ND	---	1.75	"	"	---	ND	---	---	---	30%	
Methoxychlor	ND	---	5.26	"	"	---	ND	---	---	---	30%	
Chlordane (Technical)	ND	---	52.6	"	"	---	ND	---	---	---	30%	
Toxaphene (Total)	ND	---	52.6	"	"	---	ND	---	---	---	30%	

Surr: 2,4,5,6-TCMX (Surr)

Recovery: 76 %

Limits: 42-129 %

Dilution: 1x

Decachlorobiphenyl (Surr)

119 %

65-151 %

"

Q-41

Matrix Spike (5070768-MS1)

Prepared: 07/27/15 09:39 Analyzed: 07/30/15 17:02

C-05**QC Source Sample: BB-Total Comp (A5G0329-04RE1)****EPA 8081B**

Aldrin	40.4	---	1.77	ug/kg dry	1	44.4	ND	91	45-136%	---	---	
alpha-BHC	40.5	---	1.77	"	"	"	ND	91	45-137%	---	---	
beta-BHC	40.6	---	1.77	"	"	"	ND	92	50-136%	---	---	
delta-BHC	41.8	---	1.77	"	"	"	ND	94	47-139%	---	---	
gamma-BHC (Lindane)	40.9	---	1.77	"	"	"	ND	92	49-135%	---	---	
cis-Chlordane	43.3	---	1.77	"	"	"	ND	98	54-133%	---	---	
trans-Chlordane	43.8	---	1.77	"	"	"	ND	99	53-135%	---	---	
4,4'-DDD	47.0	---	1.77	"	"	"	ND	106	56-139%	---	---	Q-41
4,4'-DDE	44.2	---	1.77	"	"	"	ND	100	56-134%	---	---	
4,4'-DDT	51.3	---	1.77	"	"	"	ND	116	50-141%	---	---	Q-41
Dieldrin	44.3	---	1.77	"	"	"	ND	100	56-136%	---	---	
Endosulfan I	42.4	---	1.77	"	"	"	ND	96	52-132%	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070768 - EPA 3546/3640A (GPC)							Soil					
Matrix Spike (5070768-MS1)				Prepared: 07/27/15 09:39		Analyzed: 07/30/15 17:02					C-05	
QC Source Sample: BB-Total Comp (A5G0329-04RE1)												
Endosulfan II	47.9	---	1.77	ug/kg dry	"	"	ND	108	53-134%	---	---	Q-41
Endosulfan sulfate	47.7	---	1.77	"	"	"	ND	108	55-136%	---	---	Q-41
Endrin	48.1	---	1.77	"	"	"	ND	108	56-140%	---	---	Q-41
Endrin Aldehyde	44.2	---	1.77	"	"	"	ND	100	35-137%	---	---	Q-41
Endrin ketone	48.6	---	1.77	"	"	"	ND	109	55-136%	---	---	Q-41
Heptachlor	41.2	---	1.77	"	"	"	ND	93	47-136%	---	---	
Heptachlor epoxide	41.0	---	1.77	"	"	"	ND	93	52-136%	---	---	
Methoxychlor	60.7	---	5.32	"	"	"	ND	137	52-143%	---	---	Q-41
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 75 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		111 %		65-151 %		"						
												Q-41

DRAFT REPORT

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11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
Blank (5070714-BLK1)						Prepared: 07/27/15 09:41		Analyzed: 07/27/15 13:16				
EPA 8270D												
Acenaphthene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	2.50	"	"	---	---	---	---	---	---	
Anthracene	ND	---	2.50	"	"	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	2.50	"	"	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	3.75	"	"	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	3.75	"	"	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	3.75	"	"	---	---	---	---	---	---	
Benzo(b+k)fluoranthene(s)	ND	---	7.50	"	"	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	2.50	"	"	---	---	---	---	---	---	
Chrysene	ND	---	2.50	"	"	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	2.50	"	"	---	---	---	---	---	---	
Fluoranthene	ND	---	2.50	"	"	---	---	---	---	---	---	
Fluorene	ND	---	2.50	"	"	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	2.50	"	"	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
Phenanthrene	ND	---	2.50	"	"	---	---	---	---	---	---	
Pyrene	ND	---	2.50	"	"	---	---	---	---	---	---	
Carbazole	ND	---	3.75	"	"	---	---	---	---	---	---	
Dibenzofuran	ND	---	2.50	"	"	---	---	---	---	---	---	
4-Chloro-3-methylphenol	ND	---	25.0	"	"	---	---	---	---	---	---	
2-Chlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4-Dichlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4-Dimethylphenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4-Dinitrophenol	ND	---	62.5	"	"	---	---	---	---	---	---	
4,6-Dinitro-2-methylphenol	ND	---	62.5	"	"	---	---	---	---	---	---	
2-Methylphenol	ND	---	6.25	"	"	---	---	---	---	---	---	
3+4-Methylphenol(s)	ND	---	6.25	"	"	---	---	---	---	---	---	
2-Nitrophenol	ND	---	25.0	"	"	---	---	---	---	---	---	

DRAFT REPORT

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11917 NE 95th Street
Vancouver, WA 98682

Project: Storedahl-Evraz

Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
Blank (5070714-BLK1)						Prepared: 07/27/15 09:41 Analyzed: 07/27/15 13:16						
4-Nitrophenol	ND	---	25.0	ug/kg wet	"	---	---	---	---	---	---	
Pentachlorophenol (PCP)	ND	---	25.0	"	"	---	---	---	---	---	---	
Phenol	ND	---	5.00	"	"	---	---	---	---	---	---	
2,3,4,6-Tetrachlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,3,5,6-Tetrachlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4,5-Trichlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4,6-Trichlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
Bis(2-ethylhexyl)phthalate	ND	---	37.5	"	"	---	---	---	---	---	---	
Butyl benzyl phthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
Diethylphthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
Dimethylphthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
Di-n-butylphthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
Di-n-octyl phthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
N-Nitrosodimethylamine	ND	---	6.25	"	"	---	---	---	---	---	---	
N-Nitroso-di-n-propylamine	ND	---	6.25	"	"	---	---	---	---	---	---	
N-Nitrosodiphenylamine	ND	---	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroethoxy) methane	ND	---	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroethyl) ether	ND	---	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroisopropyl) ether	ND	---	6.25	"	"	---	---	---	---	---	---	
Hexachlorobenzene	ND	---	2.50	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	6.25	"	"	---	---	---	---	---	---	
Hexachlorocyclopentadiene	ND	---	12.5	"	"	---	---	---	---	---	---	
Hexachloroethane	ND	---	6.25	"	"	---	---	---	---	---	---	
2-Chloronaphthalene	ND	---	2.50	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	6.25	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	6.25	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	6.25	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	6.25	"	"	---	---	---	---	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
Blank (5070714-BLK1)				Prepared: 07/27/15 09:41 Analyzed: 07/27/15 13:16								
4-Bromophenyl phenyl ether	ND	---	6.25	ug/kg wet	"	---	---	---	---	---	---	
4-Chlorophenyl phenyl ether	ND	---	6.25	"	"	---	---	---	---	---	---	
Aniline	ND	---	12.5	"	"	---	---	---	---	---	---	
4-Chloroaniline	ND	---	6.25	"	"	---	---	---	---	---	---	
2-Nitroaniline	ND	---	50.0	"	"	---	---	---	---	---	---	
3-Nitroaniline	ND	---	50.0	"	"	---	---	---	---	---	---	
4-Nitroaniline	ND	---	50.0	"	"	---	---	---	---	---	---	
Nitrobenzene	ND	---	25.0	"	"	---	---	---	---	---	---	
2,4-Dinitrotoluene	ND	---	25.0	"	"	---	---	---	---	---	---	
2,6-Dinitrotoluene	ND	---	25.0	"	"	---	---	---	---	---	---	
Benzoic acid	ND	---	312	"	"	---	---	---	---	---	---	
Benzyl alcohol	ND	---	12.5	"	"	---	---	---	---	---	---	
Isophorone	ND	---	6.25	"	"	---	---	---	---	---	---	
Azobenzene (1,2-DPH)	ND	---	6.25	"	"	---	---	---	---	---	---	
Bis(2-Ethylhexyl) adipate	ND	---	62.5	"	"	---	---	---	---	---	---	
3,3'-Dichlorobenzidine	ND	---	25.0	"	"	---	---	---	---	---	---	
1,2-Dinitrobenzene	ND	---	62.5	"	"	---	---	---	---	---	---	
1,3-Dinitrobenzene	ND	---	62.5	"	"	---	---	---	---	---	---	
1,4-Dinitrobenzene	ND	---	62.5	"	"	---	---	---	---	---	---	
Pyridine	ND	---	12.5	"	"	---	---	---	---	---	---	
Surr: Nitrobenzene-d5 (Surr)		Recovery: 94 %		Limits: 37-122 %		Dilution: 1x						
2-Fluorobiphenyl (Surr)		78 %		44-115 %		"						
Phenol-d6 (Surr)		72 %		33-122 %		"						
p-Terphenyl-d14 (Surr)		93 %		54-127 %		"						
2-Fluorophenol (Surr)		75 %		35-115 %		"						
2,4,6-Tribromophenol (Surr)		94 %		39-132 %		"						
LCS (5070714-BS1)						Prepared: 07/27/15 09:41 Analyzed: 07/27/15 13:56						
EPA 8270D												
Acenaphthene	466	---	2.67	ug/kg wet	1	533	---	87	40-122%	---	---	
Acenaphthylene	448	---	2.67	"	"	"	---	84	32-132%	---	---	

DRAFT REPORT

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11917 NE 95th Street
Vancouver, WA 98682

Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
LCS (5070714-BS1)						Prepared: 07/27/15 09:41 Analyzed: 07/27/15 13:56						
Anthracene	453	---	2.67	ug/kg wet	"	"	---	85	47-123%	---	---	
Benz(a)anthracene	500	---	2.67	"	"	"	---	94	49-126%	---	---	
Benzo(a)pyrene	524	---	4.00	"	"	"	---	98	45-129%	---	---	
Benzo(b)fluoranthene	524	---	4.00	"	"	"	---	98	45-132%	---	---	
Benzo(k)fluoranthene	492	---	4.00	"	"	"	---	92	47-132%	---	---	
Benzo(b+k)fluoranthene(s)	1040	---	8.00	"	"	1070	---	97	45-132%	---	---	
Benzo(g,h,i)perylene	507	---	2.67	"	"	533	---	95	43-134%	---	---	
Chrysene	486	---	2.67	"	"	"	---	91	50-124%	---	---	
Dibenz(a,h)anthracene	502	---	2.67	"	"	"	---	94	45-134%	---	---	
Fluoranthene	469	---	2.67	"	"	"	---	88	50-127%	---	---	
Fluorene	449	---	2.67	"	"	"	---	84	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	492	---	2.67	"	"	"	---	92	45-133%	---	---	
1-Methylnaphthalene	444	---	5.33	"	"	"	---	83	40-120%	---	---	
2-Methylnaphthalene	452	---	5.33	"	"	"	---	85	38-122%	---	---	
Naphthalene	428	---	5.33	"	"	"	---	80	35-123%	---	---	
Phenanthrene	427	---	2.67	"	"	"	---	80	50-121%	---	---	
Pyrene	443	---	2.67	"	"	"	---	83	47-127%	---	---	
Carbazole	468	---	4.00	"	"	"	---	88	50-122%	---	---	
Dibenzofuran	433	---	2.67	"	"	"	---	81	44-120%	---	---	
4-Chloro-3-methylphenol	540	---	26.7	"	"	"	---	101	45-122%	---	---	
2-Chlorophenol	507	---	13.3	"	"	"	---	95	34-121%	---	---	
2,4-Dichlorophenol	509	---	13.3	"	"	"	---	95	40-122%	---	---	
2,4-Dimethylphenol	532	---	13.3	"	"	"	---	100	30-127%	---	---	
2,4-Dinitrophenol	516	---	66.7	"	"	"	---	97	5-137%	---	---	
4,6-Dinitro-2-methylphenol	529	---	66.7	"	"	"	---	99	29-132%	---	---	
2-Methylphenol	531	---	6.67	"	"	"	---	100	32-122%	---	---	
3+4-Methylphenol(s)	529	---	6.67	"	"	"	---	99	34-120%	---	---	
2-Nitrophenol	501	---	26.7	"	"	"	---	94	36-123%	---	---	
4-Nitrophenol	494	---	26.7	"	"	"	---	93	30-132%	---	---	
Pentachlorophenol (PCP)	559	---	26.7	"	"	"	---	105	25-133%	---	---	
Phenol	522	---	5.33	"	"	"	---	98	34-120%	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evrax
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
LCS (5070714-BS1)						Prepared: 07/27/15 09:41 Analyzed: 07/27/15 13:56						
2,3,4,6-Tetrachlorophenol	524	---	13.3	ug/kg wet	"	"	---	98	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	520	---	13.3	"	"	"	---	97	40-120%	---	---	
2,4,5-Trichlorophenol	521	---	13.3	"	"	"	---	98	41-124%	---	---	
2,4,6-Trichlorophenol	518	---	13.3	"	"	"	---	97	39-126%	---	---	
Bis(2-ethylhexyl)phthalate	550	---	40.0	"	"	"	---	103	51-133%	---	---	
Butyl benzyl phthalate	555	---	26.7	"	"	"	---	104	48-132%	---	---	
Diethylphthalate	479	---	26.7	"	"	"	---	90	50-124%	---	---	
Dimethylphthalate	507	---	26.7	"	"	"	---	95	48-124%	---	---	
Di-n-butylphthalate	495	---	26.7	"	"	"	---	93	51-128%	---	---	
Di-n-octyl phthalate	533	---	26.7	"	"	"	---	100	44-140%	---	---	Q-31
N-Nitrosodimethylamine	387	---	6.67	"	"	"	---	73	23-120%	---	---	
N-Nitroso-di-n-propylamine	581	---	6.67	"	"	"	---	109	36-120%	---	---	
N-Nitrosodiphenylamine	485	---	6.67	"	"	"	---	91	38-127%	---	---	
Bis(2-Chloroethoxy) methane	480	---	6.67	"	"	"	---	90	36-121%	---	---	
Bis(2-Chloroethyl) ether	479	---	6.67	"	"	"	---	90	31-120%	---	---	
Bis(2-Chloroisopropyl) ether	539	---	6.67	"	"	"	---	101	33-131%	---	---	Q-41
Hexachlorobenzene	521	---	2.67	"	"	"	---	98	44-122%	---	---	
Hexachlorobutadiene	532	---	6.67	"	"	"	---	100	32-123%	---	---	
Hexachlorocyclopentadiene	642	---	13.3	"	"	"	---	120	5-140%	---	---	Q-41
Hexachloroethane	521	---	6.67	"	"	"	---	98	28-120%	---	---	
2-Chloronaphthalene	445	---	2.67	"	"	"	---	83	41-120%	---	---	
1,2-Dichlorobenzene	447	---	6.67	"	"	"	---	84	33-120%	---	---	
1,3-Dichlorobenzene	450	---	6.67	"	"	"	---	84	30-120%	---	---	
1,4-Dichlorobenzene	456	---	6.67	"	"	"	---	85	31-120%	---	---	
1,2,4-Trichlorobenzene	446	---	6.67	"	"	"	---	84	34-120%	---	---	
4-Bromophenyl phenyl ether	543	---	6.67	"	"	"	---	102	46-124%	---	---	
4-Chlorophenyl phenyl ether	486	---	6.67	"	"	"	---	91	45-121%	---	---	
Aniline	416	---	13.3	"	"	"	---	78	7-120%	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
LCS (5070714-BS1)						Prepared: 07/27/15 09:41 Analyzed: 07/27/15 13:56						
4-Chloroaniline	226	---	6.67	ug/kg wet	"	"	---	42	16-120%	---	---	
2-Nitroaniline	505	---	53.3	"	"	"	---	95	44-127%	---	---	
3-Nitroaniline	395	---	53.3	"	"	"	---	74	33-120%	---	---	
4-Nitroaniline	498	---	53.3	"	"	"	---	93	35-120%	---	---	
Nitrobenzene	557	---	26.7	"	"	"	---	105	34-122%	---	---	
2,4-Dinitrotoluene	514	---	26.7	"	"	"	---	96	48-126%	---	---	
2,6-Dinitrotoluene	540	---	26.7	"	"	"	---	101	46-124%	---	---	
Benzoic acid	572	---	333	"	"	1070	---	54	5-140%	---	---	
Benzyl alcohol	536	---	13.3	"	"	533	---	100	29-122%	---	---	
Isophorone	550	---	6.67	"	"	"	---	103	30-122%	---	---	
Azobenzene (1,2-DPH)	551	---	6.67	"	"	"	---	103	39-125%	---	---	
Bis(2-Ethylhexyl) adipate	535	---	66.7	"	"	"	---	100	60-121%	---	---	
3,3'-Dichlorobenzidine	876	---	26.7	"	"	1070	---	82	22-121%	---	---	
1,2-Dinitrobenzene	525	---	66.7	"	"	533	---	98	44-120%	---	---	
1,3-Dinitrobenzene	532	---	66.7	"	"	"	---	100	42-127%	---	---	
1,4-Dinitrobenzene	553	---	66.7	"	"	"	---	104	37-132%	---	---	
Pyridine	338	---	13.3	"	"	"	---	63	5-120%	---	---	
<i>Surr: Nitrobenzene-d5 (Surr) Recovery: 100 % Limits: 37-122 % Dilution: 1x</i>												
<i>2-Fluorobiphenyl (Surr) 77 % 44-115 % "</i>												
<i>Phenol-d6 (Surr) 89 % 33-122 % "</i>												
<i>p-Terphenyl-d14 (Surr) 111 % 54-127 % "</i>												
<i>2-Fluorophenol (Surr) 91 % 35-115 % "</i>												
<i>2,4,6-Tribromophenol (Surr) 112 % 39-132 % "</i>												

Q-41

Duplicate (5070714-DUP1)

Prepared: 07/27/15 09:41 Analyzed: 07/27/15 16:32

QC Source Sample: BB-Total Comp (A5G0329-04RE2)

EPA 8270D

Acenaphthene	ND	---	2.67	ug/kg dry	1	---	ND	---	---	---	30%
Acenaphthylene	ND	---	2.67	"	"	---	ND	---	---	---	30%
Anthracene	ND	---	2.67	"	"	---	ND	---	---	---	30%
Benz(a)anthracene	ND	---	2.67	"	"	---	ND	---	---	---	30%
Benzo(a)pyrene	ND	---	4.00	"	"	---	ND	---	---	---	30%

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546							Soil					
Duplicate (5070714-DUP1)				Prepared: 07/27/15 09:41		Analyzed: 07/27/15 16:32						
QC Source Sample: BB-Total Comp (A5G0329-04RE2)												
Benzo(b)fluoranthene	ND	---	4.00	ug/kg dry	"	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	---	4.00	"	"	---	ND	---	---	---	30%	
Benzo(b+k)fluoranthene(s)	ND	---	8.01	"	"	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
Chrysene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
Fluoranthene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
Fluorene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
1-Methylnaphthalene	ND	---	5.33	"	"	---	ND	---	---	---	30%	
2-Methylnaphthalene	ND	---	5.33	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	5.33	"	"	---	ND	---	---	---	30%	
Phenanthrene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
Pyrene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
Carbazole	ND	---	4.00	"	"	---	ND	---	---	---	30%	
Dibenzofuran	ND	---	2.67	"	"	---	ND	---	---	---	30%	
4-Chloro-3-methylphenol	ND	---	26.7	"	"	---	ND	---	---	---	30%	
2-Chlorophenol	ND	---	13.3	"	"	---	ND	---	---	---	30%	
2,4-Dichlorophenol	ND	---	13.3	"	"	---	ND	---	---	---	30%	
2,4-Dimethylphenol	ND	---	13.3	"	"	---	ND	---	---	---	30%	
2,4-Dinitrophenol	ND	---	66.7	"	"	---	ND	---	---	---	30%	
4,6-Dinitro-2-methylphenol	ND	---	66.7	"	"	---	ND	---	---	---	30%	
2-Methylphenol	ND	---	6.67	"	"	---	ND	---	---	---	30%	
3+4-Methylphenol(s)	ND	---	6.67	"	"	---	ND	---	---	---	30%	
2-Nitrophenol	ND	---	26.7	"	"	---	ND	---	---	---	30%	
4-Nitrophenol	ND	---	26.7	"	"	---	ND	---	---	---	30%	
Pentachlorophenol (PCP)	ND	---	26.7	"	"	---	ND	---	---	---	30%	
Phenol	ND	---	5.33	"	"	---	ND	---	---	---	30%	
2,3,4,6-Tetrachlorophenol	ND	---	13.3	"	"	---	ND	---	---	---	30%	
2,3,5,6-Tetrachlorophenol	ND	---	13.3	"	"	---	ND	---	---	---	30%	

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682

Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
Duplicate (5070714-DUP1)						Prepared: 07/27/15 09:41		Analyzed: 07/27/15 16:32				
QC Source Sample: BB-Total Comp (A5G0329-04RE2)												
2,4,5-Trichlorophenol	ND	---	13.3	ug/kg dry	"	---	ND	---	---	---	30%	
2,4,6-Trichlorophenol	ND	---	13.3	"	"	---	ND	---	---	---	30%	
Bis(2-ethylhexyl)phthalate	ND	---	40.0	"	"	---	ND	---	---	---	30%	
Butyl benzyl phthalate	ND	---	26.7	"	"	---	ND	---	---	---	30%	
Diethylphthalate	ND	---	26.7	"	"	---	ND	---	---	---	30%	
Dimethylphthalate	ND	---	26.7	"	"	---	ND	---	---	---	30%	
Di-n-butylphthalate	ND	---	26.7	"	"	---	ND	---	---	---	30%	
Di-n-octyl phthalate	ND	---	26.7	"	"	---	ND	---	---	---	30%	
N-Nitrosodimethylamine	ND	---	6.67	"	"	---	ND	---	---	---	30%	
N-Nitroso-di-n-propylamine	ND	---	6.67	"	"	---	ND	---	---	---	30%	
N-Nitrosodiphenylamine	ND	---	6.67	"	"	---	ND	---	---	---	30%	
Bis(2-Chloroethoxy) methane	ND	---	6.67	"	"	---	ND	---	---	---	30%	
Bis(2-Chloroethyl) ether	ND	---	6.67	"	"	---	ND	---	---	---	30%	
Bis(2-Chloroisopropyl) ether	ND	---	6.67	"	"	---	ND	---	---	---	30%	
Hexachlorobenzene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	6.67	"	"	---	ND	---	---	---	30%	
Hexachlorocyclopentadiene	ND	---	13.3	"	"	---	ND	---	---	---	30%	
Hexachloroethane	ND	---	6.67	"	"	---	ND	---	---	---	30%	
2-Chloronaphthalene	ND	---	2.67	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	6.67	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	6.67	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	6.67	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	6.67	"	"	---	ND	---	---	---	30%	
4-Bromophenyl phenyl ether	ND	---	6.67	"	"	---	ND	---	---	---	30%	
4-Chlorophenyl phenyl ether	ND	---	6.67	"	"	---	ND	---	---	---	30%	
Aniline	ND	---	13.3	"	"	---	ND	---	---	---	30%	
4-Chloroaniline	ND	---	6.67	"	"	---	ND	---	---	---	30%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
Duplicate (5070714-DUP1)				Prepared: 07/27/15 09:41		Analyzed: 07/27/15 16:32						
QC Source Sample: BB-Total Comp (A5G0329-04RE2)												
2-Nitroaniline	ND	---	53.3	ug/kg dry	"	---	ND	---	---	---	30%	
3-Nitroaniline	ND	---	53.3	"	"	---	ND	---	---	---	30%	
4-Nitroaniline	ND	---	53.3	"	"	---	ND	---	---	---	30%	
Nitrobenzene	ND	---	26.7	"	"	---	ND	---	---	---	30%	
2,4-Dinitrotoluene	ND	---	26.7	"	"	---	ND	---	---	---	30%	
2,6-Dinitrotoluene	ND	---	26.7	"	"	---	ND	---	---	---	30%	
Benzoic acid	ND	---	333	"	"	---	ND	---	---	---	30%	
Benzyl alcohol	ND	---	13.3	"	"	---	ND	---	---	---	30%	
Isophorone	ND	---	6.67	"	"	---	ND	---	---	---	30%	
Azobenzene (1,2-DPH)	ND	---	6.67	"	"	---	ND	---	---	---	30%	
Bis(2-Ethylhexyl) adipate	ND	---	66.7	"	"	---	ND	---	---	---	30%	
3,3'-Dichlorobenzidine	ND	---	26.7	"	"	---	ND	---	---	---	30%	
1,2-Dinitrobenzene	ND	---	66.7	"	"	---	ND	---	---	---	30%	
1,3-Dinitrobenzene	ND	---	66.7	"	"	---	ND	---	---	---	30%	
1,4-Dinitrobenzene	ND	---	66.7	"	"	---	ND	---	---	---	30%	
Pyridine	ND	---	13.3	"	"	---	ND	---	---	---	30%	
Surr: Nitrobenzene-d5 (Surr)		Recovery: 81 %		Limits: 37-122 %		Dilution: 1x						
2-Fluorobiphenyl (Surr)		65 %		44-115 %		"						
Phenol-d6 (Surr)		63 %		33-122 %		"						
p-Terphenyl-d14 (Surr)		96 %		54-127 %		"						
2-Fluorophenol (Surr)		64 %		35-115 %		"						
2,4,6-Tribromophenol (Surr)		94 %		39-132 %		"						
Q-41												

Q-41

Matrix Spike (5070714-MS1)

Prepared: 07/27/15 09:41 Analyzed: 07/27/15 17:12

QC Source Sample: BB-Total Comp (A5G0329-04RE2)

EPA 8270D

Acenaphthene	398	---	2.71	ug/kg dry	1	541	ND	74	40-122%	---	---
Acenaphthylene	391	---	2.71	"	"	"	ND	72	32-132%	---	---
Anthracene	436	---	2.71	"	"	"	ND	81	47-123%	---	---
Benz(a)anthracene	487	---	2.71	"	"	"	ND	90	49-126%	---	---
Benzo(a)pyrene	504	---	4.05	"	"	"	ND	93	45-129%	---	---

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QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546							Soil					
Matrix Spike (5070714-MS1)				Prepared: 07/27/15 09:41 Analyzed: 07/27/15 17:12								
QC Source Sample: BB-Total Comp (A5G0329-04RE2)												
Benzo(b)fluoranthene	492	---	4.05	ug/kg dry	"	"	ND	91	45-132%	---	---	
Benzo(k)fluoranthene	478	---	4.05	"	"	"	ND	88	47-132%	---	---	
Benzo(b+k)fluoranthene(s)	992	---	8.11	"	"	1080	ND	92	45-132%	---	---	
Benzo(g,h,i)perylene	497	---	2.71	"	"	541	ND	92	43-134%	---	---	
Chrysene	475	---	2.71	"	"	"	ND	88	50-124%	---	---	
Dibenz(a,h)anthracene	482	---	2.71	"	"	"	ND	89	45-134%	---	---	
Fluoranthene	457	---	2.71	"	"	"	ND	85	50-127%	---	---	
Fluorene	404	---	2.71	"	"	"	ND	75	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	471	---	2.71	"	"	"	ND	87	45-133%	---	---	
1-Methylnaphthalene	383	---	5.40	"	"	"	ND	71	40-120%	---	---	
2-Methylnaphthalene	402	---	5.40	"	"	"	ND	74	38-122%	---	---	
Naphthalene	370	---	5.40	"	"	"	ND	68	35-123%	---	---	
Phenanthrene	412	---	2.71	"	"	"	ND	76	50-121%	---	---	
Pyrene	437	---	2.71	"	"	"	ND	81	47-127%	---	---	
Carbazole	457	---	4.05	"	"	"	ND	85	50-122%	---	---	
Dibenzofuran	385	---	2.71	"	"	"	ND	71	44-120%	---	---	
4-Chloro-3-methylphenol	466	---	27.1	"	"	"	ND	86	45-122%	---	---	
2-Chlorophenol	388	---	13.5	"	"	"	ND	72	34-121%	---	---	
2,4-Dichlorophenol	408	---	13.5	"	"	"	ND	75	40-122%	---	---	
2,4-Dimethylphenol	377	---	13.5	"	"	"	ND	70	30-127%	---	---	
2,4-Dinitrophenol	526	---	67.6	"	"	"	ND	97	5-137%	---	---	
4,6-Dinitro-2-methylphenol	509	---	67.6	"	"	"	ND	94	29-132%	---	---	
2-Methylphenol	383	---	6.76	"	"	"	ND	71	32-122%	---	---	
3+4-Methylphenol(s)	389	---	6.76	"	"	"	ND	72	34-120%	---	---	
2-Nitrophenol	424	---	27.1	"	"	"	ND	78	36-123%	---	---	
4-Nitrophenol	481	---	27.1	"	"	"	ND	89	30-132%	---	---	
Pentachlorophenol (PCP)	528	---	27.1	"	"	"	ND	98	25-133%	---	---	
Phenol	404	---	5.40	"	"	"	ND	75	34-120%	---	---	
2,3,4,6-Tetrachlorophenol	490	---	13.5	"	"	"	ND	91	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	475	---	13.5	"	"	"	ND	88	40-120%	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682

Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546						Soil						
Matrix Spike (5070714-MS1)				Prepared: 07/27/15 09:41 Analyzed: 07/27/15 17:12								
QC Source Sample: BB-Total Comp (A5G0329-04RE2)												
2,4,5-Trichlorophenol	464	---	13.5	ug/kg dry	"	"	ND	86	41-124%	---	---	
2,4,6-Trichlorophenol	436	---	13.5	"	"	"	ND	81	39-126%	---	---	
Bis(2-ethylhexyl)phthalate	531	---	40.5	"	"	"	ND	98	51-133%	---	---	
Butyl benzyl phthalate	551	---	27.1	"	"	"	ND	102	48-132%	---	---	
Diethylphthalate	457	---	27.1	"	"	"	ND	84	50-124%	---	---	
Dimethylphthalate	469	---	27.1	"	"	"	ND	87	48-124%	---	---	
Di-n-butylphthalate	486	---	27.1	"	"	"	ND	90	51-128%	---	---	
Di-n-octyl phthalate	501	---	27.1	"	"	"	ND	93	44-140%	---	---	Q-31
N-Nitrosodimethylamine	333	---	6.76	"	"	"	ND	62	23-120%	---	---	
N-Nitroso-di-n-propylamine	449	---	6.76	"	"	"	ND	83	36-120%	---	---	
N-Nitrosodiphenylamine	420	---	6.76	"	"	"	ND	78	38-127%	---	---	
Bis(2-Chloroethoxy) methane	395	---	6.76	"	"	"	ND	73	36-121%	---	---	
Bis(2-Chloroethyl) ether	367	---	6.76	"	"	"	ND	68	31-120%	---	---	
Bis(2-Chloroisopropyl) ether	435	---	6.76	"	"	"	ND	80	33-131%	---	---	Q-41
Hexachlorobenzene	481	---	2.71	"	"	"	ND	89	44-122%	---	---	
Hexachlorobutadiene	429	---	6.76	"	"	"	ND	79	32-123%	---	---	
Hexachlorocyclopentadiene	555	---	13.5	"	"	"	ND	103	5-140%	---	---	Q-41
Hexachloroethane	422	---	6.76	"	"	"	ND	78	28-120%	---	---	
2-Chloronaphthalene	376	---	2.71	"	"	"	ND	70	41-120%	---	---	
1,2-Dichlorobenzene	364	---	6.76	"	"	"	ND	67	33-120%	---	---	
1,3-Dichlorobenzene	365	---	6.76	"	"	"	ND	67	30-120%	---	---	
1,4-Dichlorobenzene	368	---	6.76	"	"	"	ND	68	31-120%	---	---	
1,2,4-Trichlorobenzene	371	---	6.76	"	"	"	ND	69	34-120%	---	---	
4-Bromophenyl phenyl ether	490	---	6.76	"	"	"	ND	91	46-124%	---	---	
4-Chlorophenyl phenyl ether	436	---	6.76	"	"	"	ND	81	45-121%	---	---	
Aniline	313	---	13.5	"	"	"	ND	58	7-120%	---	---	
4-Chloroaniline	346	---	6.76	"	"	"	ND	64	16-120%	---	---	

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Columbia West Engineering, Inc.

11917 NE 95th Street
Vancouver, WA 98682

Project: Storedahl-Evraz

Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070714 - EPA 3546							Soil					
Matrix Spike (5070714-MS1)				Prepared: 07/27/15 09:41		Analyzed: 07/27/15 17:12						
QC Source Sample: BB-Total Comp (A5G0329-04RE2)												
2-Nitroaniline	448	---	54.0	ug/kg dry	"	"	ND	83	44-127%	---	---	
3-Nitroaniline	435	---	54.0	"	"	"	ND	80	33-120%	---	---	
4-Nitroaniline	440	---	54.0	"	"	"	ND	81	35-120%	---	---	
Nitrobenzene	439	---	27.1	"	"	"	ND	81	34-122%	---	---	
2,4-Dinitrotoluene	497	---	27.1	"	"	"	ND	92	48-126%	---	---	
2,6-Dinitrotoluene	492	---	27.1	"	"	"	ND	91	46-124%	---	---	
Benzoic acid	816	---	338	"	"	1080	ND	75	5-140%	---	---	
Benzyl alcohol	414	---	13.5	"	"	541	ND	77	29-122%	---	---	
Isophorone	461	---	6.76	"	"	"	ND	85	30-122%	---	---	
Azobenzene (1,2-DPH)	497	---	6.76	"	"	"	ND	92	39-125%	---	---	
Bis(2-Ethylhexyl) adipate	485	---	67.6	"	"	"	ND	90	60-121%	---	---	
3,3'-Dichlorobenzidine	860	---	27.1	"	"	1080	ND	80	22-121%	---	---	
1,2-Dinitrobenzene	475	---	67.6	"	"	541	ND	88	44-120%	---	---	
1,3-Dinitrobenzene	488	---	67.6	"	"	"	ND	90	42-127%	---	---	
1,4-Dinitrobenzene	502	---	67.6	"	"	"	ND	93	37-132%	---	---	
Pyridine	233	---	13.5	"	"	"	ND	43	5-120%	---	---	

Surr: Nitrobenzene-d5 (Surr)

Recovery: 81 %

Limits: 37-122 %

Dilution: 1x

2-Fluorobiphenyl (Surr)

70 %

44-115 %

"

Phenol-d6 (Surr)

70 %

33-122 %

"

p-Terphenyl-d14 (Surr)

109 %

54-127 %

"

2-Fluorophenol (Surr)

71 %

35-115 %

"

2,4,6-Tribromophenol (Surr)

102 %

39-132 %

"

Q-41

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070314 - EPA 3051A						Soil						
Blank (5070314-BLK1)						Prepared: 07/13/15 15:35		Analyzed: 07/13/15 19:01				
EPA 6020A												
Arsenic	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.200	"	"	---	---	---	---	---	---	
Manganese	ND	---	1.00	"	"	---	---	---	---	---	---	
Mercury	ND	---	0.0800	"	"	---	---	---	---	---	---	
Zinc	ND	---	4.00	"	"	---	---	---	---	---	---	
Blank (5070314-BLK2)						Prepared: 07/13/15 15:35		Analyzed: 07/14/15 15:52				
EPA 6020A												
Copper	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	Q-16
LCS (5070314-BS1)						Prepared: 07/13/15 15:35		Analyzed: 07/13/15 19:06				
EPA 6020A												
Arsenic	48.6	---	1.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Cadmium	50.2	---	0.200	"	"	"	---	100	"	---	---	
Copper	52.6	---	2.00	"	"	"	---	105	"	---	---	
Manganese	49.6	---	1.00	"	"	"	---	99	"	---	---	
Mercury	1.04	---	0.0800	"	"	1.00	---	104	"	---	---	
Zinc	52.0	---	4.00	"	"	50.0	---	104	"	---	---	
Duplicate (5070314-DUP1)						Prepared: 07/13/15 15:35		Analyzed: 07/13/15 19:43				
QC Source Sample: BB-Total Comp (A5G0329-04)												
EPA 6020A												
Arsenic	5.16	---	1.12	mg/kg dry	10	---	3.91	---	---	28	40%	
Cadmium	ND	---	0.224	"	"	---	0.121	---	---	***	40%	
Copper	26.0	---	2.24	"	"	---	25.2	---	---	3	40%	
Manganese	354	---	1.12	"	"	---	323	---	---	9	40%	
Mercury	ND	---	0.0898	"	"	---	ND	---	---	---	40%	
Zinc	34.7	---	4.49	"	"	---	28.9	---	---	18	40%	
Matrix Spike (5070314-MS1)						Prepared: 07/13/15 15:35		Analyzed: 07/13/15 19:48				
QC Source Sample: BB-Total Comp (A5G0329-04)												
EPA 6020A												

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry RiceReported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070314 - EPA 3051A							Soil					
Matrix Spike (5070314-MS1)					Prepared: 07/13/15 15:35		Analyzed: 07/13/15 19:48					
QC Source Sample: BB-Total Comp (A5G0329-04)												
Arsenic	59.1	---	1.09	mg/kg dry	10	54.3	3.91	102	75-125%	---	---	
Cadmium	53.3	---	0.217	"	"	"	0.121	98	"	---	---	
Copper	79.4	---	2.17	"	"	"	25.2	100	"	---	---	
Manganese	381	---	1.09	"	"	"	323	108	"	---	---	
Mercury	1.02	---	0.0868	"	"	1.09	ND	94	"	---	---	
Zinc	87.4	---	4.34	"	"	54.3	28.9	108	"	---	---	

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682

Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070723 - EPA 3051A						Soil						
Blank (5070723-BLK1)						Prepared: 07/27/15 11:17		Analyzed: 07/28/15 22:50				
EPA 6020A												
Chromium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.200	"	"	---	---	---	---	---	---	
LCS (5070723-BS1)						Prepared: 07/27/15 11:17		Analyzed: 07/28/15 22:53				
EPA 6020A												
Chromium	51.2	---	1.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Lead	50.8	---	0.200	"	"	"	---	102	"	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry Rice**Reported:**
07/31/15 16:42

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070299 - Total Solids (Dry Weight)							Soil					
Duplicate (5070299-DUP3)					Prepared: 07/13/15 15:29		Analyzed: 07/14/15 09:14					
QC Source Sample: BB-N Comp (A5G0329-03)												
EPA 8000C												
% Solids	96.2	---	1.00	% by Weight	1	---	96.0	---	---	0.2	10%	
Duplicate (5070299-DUP4)					Prepared: 07/13/15 15:30		Analyzed: 07/14/15 09:14					
QC Source Sample: BB-Total Comp (A5G0329-04)												
EPA 8000C												
% Solids	95.6	---	1.00	% by Weight	1	---	95.6	---	---	0	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry Rice**Reported:**
07/31/15 16:42**SAMPLE PREPARATION INFORMATION****Polychlorinated Biphenyls by EPA 8082A****Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5070726							
A5G0329-04	Soil	EPA 8082A	07/13/15 09:11	07/27/15 12:08	11.38g/5mL	10g/5mL	0.88

Organochlorine Pesticides by EPA 8081B**Prep: EPA 3546/3640A (GPC)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5070768							
A5G0329-04RE1	Soil	EPA 8081B	07/13/15 09:11	07/27/15 09:39	11.61g/10mL	10g/5mL	1.72

Semivolatile Organic Compounds by EPA 8270D**Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5070714							
A5G0329-04RE2	Soil	EPA 8270D	07/13/15 09:11	07/27/15 09:41	15.81g/2mL	15g/2mL	0.95

Total Metals by EPA 6020 (ICPMS)**Prep: EPA 3051A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5070314							
A5G0329-01	Soil	EPA 6020A	07/13/15 08:40	07/13/15 15:35	0.516g/50mL	0.5g/50mL	0.97
A5G0329-02	Soil	EPA 6020A	07/13/15 08:50	07/13/15 15:35	0.504g/50mL	0.5g/50mL	0.99
A5G0329-03	Soil	EPA 6020A	07/13/15 09:00	07/13/15 15:35	0.475g/50mL	0.5g/50mL	1.05
A5G0329-04	Soil	EPA 6020A	07/13/15 09:11	07/13/15 15:35	0.475g/50mL	0.5g/50mL	1.05
Batch: 5070723							
A5G0329-04	Soil	EPA 6020A	07/13/15 09:11	07/27/15 11:17	0.476g/50mL	0.5g/50mL	1.05

Percent Dry Weight**Prep: Total Solids (Dry Weight)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5070299							
A5G0329-01	Soil	EPA 8000C	07/13/15 08:40	07/13/15 15:29	1N/A/1N/A	1N/A/1N/A	NA
A5G0329-02	Soil	EPA 8000C	07/13/15 08:50	07/13/15 15:29	1N/A/1N/A	1N/A/1N/A	NA
A5G0329-03	Soil	EPA 8000C	07/13/15 09:00	07/13/15 15:29	1N/A/1N/A	1N/A/1N/A	NA

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682

Project: Storedahl-Evraz
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A5G0329-04	Soil	EPA 8000C	07/13/15 09:11	07/13/15 15:29	1N/A/1N/A	1N/A/1N/A	NA

DRAFT REPORT

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Project: **Storedahl-Evraz**

Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

Notes and Definitions

Qualifiers:

- C-05 Extract has undergone a GPC (Gel-Permeation Chromatography) cleanup per EPA 3640A. Reporting levels may be raised due to dilution necessary for cleanup. Sample Final Volume includes the GPC dilution factor, see the Prep page for details.
- C-07 Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- Q-16 Reanalysis of an original Batch QC sample.
- Q-31 Estimated Results. Recovery of Continuing Calibration Verification sample below lower control limit for this analyte. Results are likely biased low.
- Q-41 Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.

Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to 1/2 the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.

For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.

Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- *** Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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Vancouver, WA 98682

Project: **Storedahl-Evraz**
Project Number: 1033Q
Project Manager: Terry Rice

Reported:
07/31/15 16:42

[illegible]

DRAFT REPORT

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